

Page 2, line 30 after "sequences" insert -- (SEQ ID NO: 13; SEQ ID NO: 14; and
SEQ ID NO: 15 respectively) --

Page 3, line 3 after "sequences" insert -- (SEQ ID NO: 10 and SEQ ID NO: 11
respectively)--

line 7 after "sequences" insert -- (SEQ ID NO: 7)--

line 9 after "sequence" insert -- (SEQ ID NO: 8 and SEQ ID NO: 9
respectively) --

line 13 after "sequence" insert -- (SEQ ID NO: 3) --

line 15 after "sequences" insert -- (SEQ ID NO: 4; SEQ ID NO: 5; and
SEQ ID NO: 6 respectively) --

line 19 after "fragment" insert -- (SEQ ID NO: 1) --

Page 4, line 22 after "fragment" insert -- (SEQ ID NO: 1) --

Page 14, line 25 after "sequence" insert -- (SEQ ID NO: 1) --

line 27 after "sequence" insert -- (SEQ ID NO: 2) --

Page 18, line 21 after "48 K N-Terminal" insert -- (SEQ ID NO: 3) --

line 22 after "48 K CNBR F 1" insert -- (SEQ ID NO: 4) --

line 23 after "48 K CNBR F 2" insert -- (SEQ ID NO: 5) --

line 24 after "48 K CNBR F 3" insert -- (SEQ ID NO: 6) --

line 26 after "52 K N-Terminal" insert -- (SEQ ID NO: 7) --

line 27 after "52 K CNBR F 1" insert -- (SEQ ID NO: 8) --

Page 18, line 28

after "52 K CNBR F 2" insert -- (SEQ ID NO: 9) --

Page 18, line 30

after "52 K N-Terminal" insert -- (SEQ ID NO: 10) --

line 32

after "52 K N-Terminal" insert -- (SEQ ID NO: 11) --

Page 19, line 1

after "74 K N-Terminal" insert -- (SEQ ID NO: 12) --

line 2

after "74 K CNBR F 1" insert -- (SEQ ID NO: 13) --

line 3

after "74 K CNBR F 2" insert -- (SEQ ID NO: 14) --

line 5

after "74 K CNBR F 3" insert -- (SEQ ID NO: 15) --

line 18

after "Oligo 48 K CNBr F 1" insert -- (SEQ ID NO: 16) --

line 20

after "Oligo 48 K CNBr F 2" insert -- (SEQ ID NO: 17) --

line 24

after "Oligo 48 K CNBr F 3" insert -- (SEQ ID NO: 18) --

Page 25, line 15

after "herein" insert the following Sequence Listing:

SEQUENCE LISTING

<110> Walker, John
Lee, Rogan
Dougherty, Stephen W.
<120> Antigen Composition Against Mycoplasma
<130> U-011415-0
<140> US 08/913,430
<141> 1997-09-12
<150> PCT/AU96/00149
<151> 1996-03-15
<150> PN 1789
<151> 1995-03-16
<160> 15
<170> PatentIn Ver. 2.0 - beta

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<212> DNA
ent C' <213> Mycoplasma hyopneumoniae
<400> 1

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atcgaaatcc aaccaggcat aaatctttgt cagtatttat caagtcggta ttttttcatt 240
atttctacta aaatattatt tgaatttgca ttttccataa tctaaaattt tacatttttt 300
tataacaatt tttaaaaatt actctttaat ttatagtatt tttttatttt ttagtctaaa 360

ttataaaatt atcttgaatt ttatttgaat ttttataatt tagtactaaa aaatacaaat 420
 attttttcct attctaagaa aaattcattt tttaaaaaaa attgattttt atagtataat 480
 ttgtttgtat aattgaatta acttgatttg aaaggggaaca aaatgaaaaa aatgcttaga 540
 aaaaaattct tgtattcatc agctatttat gcaacttcgc ttgcatcaat tattgcattt 600
 gttgcagcag gttgtggaca gacagaatca ggttcaactt ctgattctaa accacaagcc 660
 gagacgctaa aacataaagt aagtaatgat tctattcgaa tagcactaac cgatccggat 720
 aatcctcgat gaattagtgc ccaaaaagat attatttctt atgttgatga aacagaggca 780
 gcaacttcaa caattacaaa aaaccaggat gcacaaaata actgactcac tcagcaagct 840
 aatttaagcc cagcgccaaa aggatttatt attgcccctg aaaatggaag tggagttgga 900
 actgctgtta atacaattgc tgataaagga attccgattg ttgcctatga tcgactaatt 960
 actggatctg ataaatatga ttggtatgtt tcttttgata atgaaaaagt tgggtgaatta 1020
 caaggtcttt cacttgctgc ggggtctatta ggaaaagaag atggtgcttt tgattcaatt 1080
 gatcaaatga atgaatatct aaaatcacat atgccccag agacaatttc tttttataca 1140
 atcgcggtt cccaagatga taataattcc caatattttt ataatggtgc aatgaaagta 1200
 cttaaagaat taatgaaaaa ttgcgaaaat aaaataattg atttatctcc tgaaggcgaa 1260
 aatgctgttt atgtcccagg atgaaattat ggaactgccc gtcaaagaat ccaatctttt 1320
 ctaacaatta acaaagatcc agcaggtggt aataaaatca aagctgttgg ttcaaaacca 1380
 gcttctattt tcaaaggatt tcttgcccca aatgatggaa tggccgaaca agcaatcacc 1440
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 gataaagcca aaacttttat caaagacggc gatcaaaata tgacaattta taaacctgat 1560
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<212> PRT

<213> Mycoplasma hyopneumoniae

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20 25 30

Gln Thr Glu Ser Gly Ser Thr Ser Asp Ser Lys Pro Gln Ala Glu Thr
35 40 45

Leu Lys His Lys Val Ser Asn Asp Ser Ile Arg Ile Ala Leu Thr Asp
50 55 60

Pro Asp Asn Pro Arg Trp Ile Ser Ala Gln Lys Asp Ile Ile Ser Tyr
65 70 75 80

Val Asp Glu Thr Glu Ala Ala Thr Ser Thr Ile Thr Lys Asn Gln Asp
85 90 95

Ala Gln Asn Asn Trp Leu Thr Gln Gln Ala Asn Leu Ser Pro Ala Pro
100 105 110

8' cont. Lys Gly Phe Ile Ile Ala Pro Glu Asn Gly Ser Gly Val Gly Thr Ala
115 120 125

Val Asn Thr Ile Ala Asp Lys Gly Ile Pro Ile Val Ala Tyr Asp Arg
130 135 140

Leu Ile Thr Gly Ser Asp Lys Tyr Asp Trp Tyr Val Ser Phe Asp Asn
145 150 155 160

Glu Lys Val Gly Glu Leu Gln Gly Leu Ser Leu Ala Ala Gly Leu Leu
165 170 175

Gly Lys Glu Asp Gly Ala Phe Asp Ser Ile Asp Gln Met Asn Glu Tyr
180 185 190

Leu Lys Ser His Met Pro Gln Glu Thr Ile Ser Phe Tyr Thr Ile Ala
195 200 205

Gly Ser Gln Asp Asp Asn Asn Ser Gln Tyr Phe Tyr Asn Gly Ala Met
210 215 220

Lys Val Leu Lys Glu Leu Met Lys Asn Ser Gln Asn Lys Ile Ile Asp
 225 230 235 240
 Leu Ser Pro Glu Gly Glu Asn Ala Val Tyr Val Pro Gly Trp Asn Tyr
 245 250 255
 Gly Thr Ala Gly Gln Arg Ile Gln Ser Phe Leu Thr Ile Asn Lys Asp
 260 265 270
 Pro Ala Gly Gly Asn Lys Ile Lys Ala Val Gly Ser Lys Pro Ala Ser
 275 280 285
 Ile Phe Lys Gly Phe Leu Ala Pro Asn Asp Gly Met Ala Glu Gln Ala
 290 295 300
 Ile Thr Lys Leu Lys Leu Glu Gly Phe Asp Thr Gln Lys Ile Phe Val
 305 310 315 320
 Thr Arg Gln Asp Tyr Asn Asp Lys Ala Lys Thr Phe Ile Lys Asp Gly
 325 330 335
 Asp Gln Asn Met Thr Ile Tyr Lys Pro Asp Lys Val Leu Gly Lys Val
 340 345 350
 Ala Val Glu Val Leu Arg Val Leu Ile Ala Lys Lys Asn Lys Ala Ser
 355 360 365
 Arg Ser Glu Val Glu Asn Glu Leu Lys Ala Lys Leu Pro Asn Ile Ser
 370 375 380
 Phe Lys Tyr Asp Asn Gln Thr Tyr Lys Val Gln Gly Lys Asn Ile Asn
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Pro Asp Ala

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<212> PRT

<213> Mycoplasma hyopneumoniae

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Gln Ala Glu Thr Leu Lys His Lys Val
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<210> 4

<211> 29

<212> PRT

<213> Mycoplasma hyopneumoniae

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Thr Ile Tyr Lys Pro Asp Lys Val Leu Gly Lys Val Ala Val Glu Val
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20 25

<210> 5

<211> 16

<212> PRT

<213> Mycoplasma hyopneumoniae

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<210> 6

<211> 14

<212> PRT

<213> Mycoplasma hyopneumoniae

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5 10

<210> 7

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<210> 8

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<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 8

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B'
cont.

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<211> 21

<212> PRT

<213> Mycoplasma hyopneumoniae

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<210> 10

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<223> Residue may be L

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Met Lys Leu Ala Lys Leu Leu Lys Gly Phe Xaa Asn Met Ile Lys
5 10 15

<210> 11

<211> 15

<212> PRT

<213> Mycoplasma hyopneumoniae

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<222> (4)

<223> Residue may be I

<220>

<221> VARIANT

<222> (5)

<223> Residue may be E

<220>

<221> VARIANT

<222> (7)

<223> Residue may be A

<220>

<221> VARIANT

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Ala Asp Pro Phe Arg Tyr Val Pro Gln Gly Gln Xaa Met Val Gly
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<210> 12

<211> 18

<212> PRT

<213> Mycoplasma hyopneumoniae

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Ala Gly Xaa Leu Gln Lys Asn Ser Leu Leu Glu Glu Val Trp Tyr Leu
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Ala Leu

<210> 13

<211> 20

<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 13

Ala Lys Asn Phe Asp Phe Ala Pro Ser Ile Gln Gly Tyr Lys Lys Ile
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Ala His Glu Leu
20

<210> 14

<211> 12

<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 14

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B'
 cont.
 <210> 15

<211> 19

<212> PRT

<213> Mycoplasma hyopneumoniae

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Leu Leu Lys Ala Glu Xaa Asn Lys Xaa Ile Glu Glu Ile Asn Thr Xaa
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Leu Asp Asn

<210> 16

<211> 23

<212> DNA

<213> Mycoplasma hyopneumoniae

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<222> (3)

<223> modified base (Inosine) used in primer sequence

<220>

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<222> (18)

<223> modified base (Inosine) used in primer sequence

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23

<210> 17

<211> 23

<212> DNA

<213> Mycoplasma hyopneumoniae

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<223> modified base (Inosine) used in primer sequence

<400> 17

ttiagcttig tgatigcctg etc

23

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<213> Mycoplasma hyopneumoniae

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<223> modified base (Inosine) used in primer sequence

<400> 18

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20

b'
vercl.